September 7, 2005

Mr. James J. Sheppard
President and Chief Operating Officer
STP Nuclear Operating Company
South Texas Project Electric
Generating Station
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT (STP), UNIT 1 - RESPONSE TO U.S. NUCLEAR REGULATORY COMMISSION BULLETIN 2003-02, "LEAKAGE FROM REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY" (TAC NO. MC0566)

Dear Mr. Sheppard:

On August 21, 2003, the U.S. Nuclear Regulatory Commission (NRC) issued NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity," to the industry. This Bulletin informed addressees that current methods of inspecting the reactor pressure vessel (RPV) lower heads may need to be supplemented with bare-metal visual inspections in order to detect reactor coolant pressure boundary leakage and requested these addressees provide the NRC with information related to inspections that have been performed to verify the integrity of the RPV lower head penetrations.

The Bulletin requested that addressees provide a description of the RPV lower head penetration inspection program that would be implemented at their respective plants during the next and subsequent refueling outages. This description was to include the extent of the inspection, the inspection methods to be used, the qualification standards for the inspection methods, the process used to resolve the source of findings of boric acid deposits or corrosion, the inspection documentation to be generated, and the basis for concluding that their plant satisfied applicable regulatory requirements related to the structural and leakage integrity of the RPV lower head penetrations.

By letter dated November 4, 2003, as supplemented by letter dated June 7, 2004, STP Nuclear Operating Company (STPNOC) provided its response to this request for STP, Unit 1. In its November 4, 2003, submittal, STPNOC indicated that bare-metal visual inspections of all 58 RPV lower head penetrations are performed during each refueling outage and selected forced outages. On April 12, 2003, STPNOC discovered reactor coolant leakage at penetrations 1 and 46. Subsequent ultrasonic (UT), eddy current, and visual examinations confirmed that there was no evidence of cracking on the remaining 56 penetrations. Penetrations 1 and 46 were successfully repaired. In its letter dated July 17, 2003, STPNOC committed to perform volumetric and enhanced visual examinations of the RPV lower head penetrations at the next in-service inspection of the RPV.

STPNOC also committed to perform UT examinations of the RPV base metal around the two repaired penetrations at future selected refueling outages to confirm there are no indications of RPV wastage from reactor coolant water in the gap area of the repaired penetrations. As such, STPNOC is requested to notify the NRC staff in writing of any changes to this commitment prior to implementation.

The Bulletin also requested that addressees provide a summary of the RPV lower head penetration inspection that was performed at their plants, the extent of the inspection and the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.

By letter dated June 2, 2005, STPNOC provided a summary of its inspection results from the spring 2005 refueling outage at STP, Unit 1. STPNOC reported it had performed a bare-metal visual inspection of the RPV lower head, including an inspection of the entire annulus of each of the 58 RPV lower head penetrations. STPNOC did not observe any evidence of RPV lower head penetration leakage.

Based on its review of STPNOC's responses, the NRC staff finds that STPNOC has met the reporting requirements of the Bulletin for STP, Unit 1. Accordingly, TAC No. MC0566 is closed for STP, Unit 1.

Sincerely,

/RA/

David H. Jaffe, Senior Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No.: 50-498

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Sincerely,

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David H. Jaffe, Senior Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
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South Texas Project, Units 1 & 2

cc:

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 910
Bay City, TX 77414

C. Kirksey/C. M. Canady
City of Austin
Electric Utility Department
721 Barton Springs Road
Austin, TX 78704

Mr. J. J. Nesrsta
Mr. R. K. Temple
City Public Service Board
P. O. Box 1771
San Antonio, TX 78296

INPO
Records Center
700 Galleria Parkway
Atlanta, GA 30339-3064

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011

Jack A. Fusco/Michael A. Reed
Texas Genco, LP
12301 Kurland Drive
Houston, TX 77034

Judge, Matagorda County
Matagorda County Courthouse
1700 Seventh Street
Bay City, TX 77414

A. H. Gutterman, Esq.
Morgan, Lewis & Bockius
1111 Pennsylvania Avenue, NW
Washington, DC 20004

E. D. Halpin
Vice President Oversight
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

S. M. Head, Manager, Licensing
STP Nuclear Operating Company
P. O. Box 289, Mail Code: N5014
Wadsworth, TX 77483

Environmental and Natural Resources
Policy Director
P. O. Box 12428
Austin, TX 78711-3189

Jon C. Wood
Cox Smith Matthews
112 East Pecan, Suite 1800
San Antonio, TX 78205

Director
Division of Compliance & Inspection
Bureau of Radiation Control
Texas Department of State Health Services
1100 West 49th Street
Austin, TX 78756

Brian Almon
Public Utility Commission
William B. Travis Building
P. O. Box 13326
1701 North Congress Avenue
Austin, TX 78701-3326

Susan M. Jablonski
Office of Permitting, Remediation
and Registration
Texas Commission on
Environmental Quality
MC-122
P.O. Box 13087
Austin, TX 78711-3087

Mr. Terry Parks, Chief Inspector
Texas Department of Licensing
and Regulation
Boiler Division
P. O. Box 12157
Austin, TX 78711

Mr. Ted Enos
4200 South Hulen
Suite 630
Ft. Worth, Texas 76109